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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,670	09/28/2006	Maziar Nekovee	36-2008	2316

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EXAMINER	
CHENEY, BOBAE K.	

ART UNIT	PAPER NUMBER
2469	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/594,670	NEKOVEE ET AL.	
	Examiner	Art Unit	
	BOBAE K. CHENEY	2469	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-7,10-17 and 21-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-7,10-17 and 21-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 July 2010* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. Examiner made graphical error of not addressing claims 3, 4, and 10 – 12. Therefore, examiner withdrawn final rejection sent out on 09/30/2010.

2. Claims 1, 2, 8, 9, and 18 – 20 have been cancelled by applicant. Claims 3 – 7, 10 – 17, and 21 – 25 are amended by applicant.

Claim Objections

3. **Claim 15** is objected to because of the following informalities: Claim 15 recites "... transmission in an aggregated **data data** file." Appropriate correction is required. For the examination purpose, examiner interpret "aggregated data data file" as "aggregated data file."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 3 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki (US Patent 6,434,623) in views of Akhtar (US Patent 6,418,139) and Vleet (US Publication 2005/0033803).

6. Regarding to **claim 3**, Sasaki teaches receiving a plurality of data files at a relay device, at least one of the data files being a compressed data file [Column 2 Line 29 – 52: receiving data files including a compression format of data],

Processing the data therein to create a plurality of aggregated compressed data files [Column 2 Line 29 – 52: integrating data files, data file including compressed data file], and

Wherein the compression and aggregation technique applied to the data [Column 2 Line 29 – 52: integrating compressed data files]

Even though Sasaki teaches aggregated compressed data file, Sasaki does not expressly teach "*a method of transmitting data over a decentralised network, the method comprising:*

Transmitting the data file to a plurality of similar relay devices over the decentralised network

Wherein each individual data file has a predetermined expiry time, and data files are only forwarded if they have not exceeded their predetermined expiry time."

However, Akhtar teaches a method of transmitting data over a decentralised network [Abstract], the method comprising:

Transmitting the data file to a plurality of similar relay devices over the decentralised network [Column 6 Line 9 – 35: forwarding data traffic],

Wherein each individual data file has a predetermined expiry time, and data files are only forwarded if they have not exceeded their predetermined expiry time [Column 7 Line 44 – 47: packet with time to live (expiry time) and if it is expired, then they do not

forward the packet]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have expiry time taught by Akhtar on aggregated compressed data file taught by Sasaki for the purpose of providing improved routing real-time data traffic in a communication network [Akhtar Column 4 Line 25 – 27].

Sasaki and Akhtar do not expressly teach "*wherein the technique applied to the data is a Bloom filter process*."

However, Vleet teaches wherein the technique applied to the data is a Bloom filter process [Paragraph 55: using Bloom filter process]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Bloom filter process taught by Vleet in compression and aggregation data taught by Sasaki for the purpose of reducing the processing and data retrieval [Vleet Paragraph 55].

7. Regarding to **claim 10**, Sasaki teaches a receiver [Figure 1 Part 200] for receiving a plurality of data files, at least one of the data files being a compressed data file [Column 2 Line 29 – 52: receiving data files including a compression format of data],

An aggregation processor [Figure 1 Part 205] for processing the data therein to create a plurality of aggregated compressed data files [Column 2 Line 29 – 52: integrating data files, data file including compressed data file], and

Even though Sasaki teaches aggregated compressed data file, Sasaki does not expressly teach "*Relay device comprising:*

A transmitter for selecting a plurality of similar relay devices and transmitting the data file to the selected relay devices over a decentralised network,

Means for determining a predetermined expiry time for each aggregate data file, and selecting for transmission only those data files that have not exceeded their expiry time;."

However, Akhtar teaches a relay device [Abstract: routers] comprising:

A transmitter for selecting a plurality of similar relay devices and transmitting the data file to a plurality of similar relay devices over the decentralised network [Column 6 Line 9 – 35: forwarding data traffic to other devices. In order to forward data traffic, it needs to select device which will be transmitted to.],

Means for determining a predetermined expiry time for each aggregate data file, and selecting for transmission only those data files that have not exceeded their expiry time [Column 7 Line 44 – 47: packet with time to live (expiry time) and if it is expired, then they do not forward the packet]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have expiry time taught by Akhtar on aggregated compressed data file taught by Sasaki for the purpose of providing improved routing real-time data traffic in a communication network [Akhtar Column 4 Line 25 – 27].

Sasaki and Akhtar do not expressly teach "*wherein the relay device has a configuration to handle the data in the form of Bloom filters*."

However, Vleet teaches wherein the relay device has a configuration to handle the data in the form of Bloom filters [Paragraph 55: using Bloom filter process]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Bloom filter process taught by Vleet in compression and aggregation

data taught by Sasaki for the purpose of reducing the processing and data retrieval [Vleet Paragraph 55].

8. **Claims 4, 11, and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki, Akhtar, and Vleet as applied to claims 3 and 10 above, and further in view of Yosef (US Publication 2005/0259682).

9. Regarding to **claim 4**, even though Akhtar teaches message with expiry time, Akhtar does not expressly teach "*wherein data files received by a relay device having the same expiry time are aggregated into a single data file for further dissemination*."

However, Yosef teaches wherein data files received by a relay device having the same expiry time are aggregated into a single data file for further dissemination [Paragraph 198: combining (aggregating) files with same expiring time]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to aggregate data with same expiring time taught by Yosef when data is received taught by Akhtar for the purpose of solve the lack of bandwidth problem [Yosef Paragraph 4].

10. Regarding to **claim 11**, even though Akhtar teaches message with expiry time, Akhtar does not expressly teach "*wherein the aggregation processor is arranged to aggregate data files having the same expiry time aggregated into a single data file for further transmission*."

However, Yosef teaches wherein the aggregation processor is arranged to aggregate data files having the same expiry time aggregated into a single data file for further transmission [Paragraph 198: combining (aggregating) files with same expiring time]. Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to aggregate data with same expiring time taught by Yosef when data is received taught by Akhtar for the purpose of solve the lack of bandwidth problem [Yosef Paragraph 4].

11. Regarding to **claim 12**, Yosef teaches having means for disseminating a plurality of such aggregate data files having different expiry times [Paragraph 198: files with different expiry time]. Therefore, it will be obvious to combine Yosef for the same reason set for claim 11.

12. **Claims 5 – 7, and 13 – 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki, Akhtar, and Vleet as applied to claims 3 and 10 above, and further in view of Van Renesse (US Patent 6,411,967).

13. Regarding to **claim 5**, Sasaki teaches wherein the aggregated compressed data files [Column 2 Line 29 – 52: integrating compressed data files].

Sasaki does not expressly teach "*wherein the data files are transmitted using an epidemic dissemination process.*"

However, Van Renesse teaches wherein the data files are transmitted using an epidemic dissemination process [Abstract: nodes gossiping among themselves]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit aggregated data files taught by Sasaki using epidemic dissemination process taught by Van Renesse for the purpose of ensuring that data files are propagated across the membership [Van Renesse Column 7 Line 35 – 45].

14. Regarding to **claim 6**, Van Renesse teaches wherein each relay device stores each data file received, compares subsequently received data files with those already

stored, and suspends the aggregating and forwarding process for any duplicate data files identified [Column 3 Line 55 - Column 4 Line 10: messages with version number and if the version number of new message is bigger than the version number on base, then store the new message and if the version number is smaller than the version number on base, then ignores the message (suspend process)]. Therefore, it will be obvious to combine Van Renesse for the same reason set for claim 5 above.

15. Regarding to **claim 7**, Van Renesse teaches wherein at least some of the relay devices receive compressed data from associated data generation and compression means [Column 3 Line 55 – Column 4 Line 10: receiving update information from other node it was updated]. Therefore, it will be obvious to combine Van Renesse for the same reason set for claim 5 above.

16. Regarding to **claim 13**, Sasaki, Akhtar, and Vleet do not expressly teach "*wherein the transmitter operates according to an epidemic dissemination process*."

However, Van Renesse teaches wherein the transmitter operates according to an epidemic dissemination process [Abstract: nodes gossiping among themselves]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit aggregated data files taught by Sasaki using epidemic dissemination process taught by Van Renesse for the purpose of ensuring that data files are propagated across the membership [Van Renesse Column 7 Line 35 – 45].

17. Regarding to **claim 14**, Van Renesse teaches comprising data storage means for storing each data fie received, and processing means for comparing each stored data file with those subsequently received, and wherein the transmission means is arranged

to only transmit those received data files that are not duplicated in the data storage means [Column 3 Line 55 - Column 4 Line 10: messages with version number and if the version number of new message is bigger than the version number on base, then store the new message and if the version number is smaller than the version number on base, then ignores the message (suspend process)]. Therefore, it will be obvious to combine Van Renesse for the same reason set for claim 5 above.

18. Regarding to **claim 15**, Van Renesse teaches further having means to receive further data from data generation means, and means to compress the data for transmission in an aggregated data file [Column 3 Line 55 – Column 4 Line 10: receiving update information from other node it was updated]. Therefore, it will be obvious to combine Van Renesse for the same reason set for claim 5 above.

19. Regarding to **claim 16**, Van Renesse teaches having analysis means for analyzing incoming aggregate data files to capture data contained therein [Column 3 Line 55 – Column 4 Line 10: updating replicate management information based with update message with information. In order to update base with update message, it needs to capture the date contained in the message].

20. **Claims 17, 21, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Renesse (US Patent 6,411,967) in views of Sasaki (US Patent 6,434,623), Akhtar (US Patent 6,418,139) and Vleet (US Publication 2005/0033803).

21. Regarding to **claim 17**, Van Renesse teaches a decentralized communications network in which a plurality of servers collectively maintain a database that records event reports [Figure 1, Column 1 Line 24 – 43: decentralized network with each node

maintaining Replicated management information base (database)], the plurality of servers forming an overlay network and intercommunicating using a common messaging strategy based on a publisher forwarding scheme running over the overlay network [Column 1 Line 6 – 43: network using messaging scheme and node sends out update message to other nodes (publisher forwarding scheme)], the servers having means to aggregate data messages [Column 6 Line 21 – 27: combining two update messages into a composite update message] received from one or more other servers to create one or more aggregate data file [Column 4 Line 12 – 29: gossip the updates to one another. When the nodes are gossiping the updates to one another, nodes will receive plurality of updates (data files)], and to broadcast the aggregate message to one or more of the other servers [Abstract: nodes gossip among themselves to update the nodes], at least one of the servers having means to generate data files [Column 6 Line 21 – 27: aggregating update messages] in response to specific events, and means to aggregate the data files so generated with the data files received from the other servers [Column 3 Line 55 - Column 4 Line 10: each node update its node by its own or by update message from Other nodes], the servers have means to modify the aggregate data files they receive before broadcasting them [Column 3 Line 55 – Column 4 Line 10: updating version number before sending to other nodes], using an epidemic dissemination process [Abstract: nodes gossiping among themselves].

Van Renesse does not expressly teach "*compressed data files*."

However, Sasaki teaches compressed data files [Column 2 Line 29 – 52: data file including compressed data file]. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to aggregate taught by Van Renesse compressed data files taught by Sasaki for the purpose of minimizing a load of the communication channel [Sasaki Column 1 Line 57 – 63].

Van Renesse and Sasaki do not expressly teach "*wherein each individual aggregate Bloom filter data file*."

However, Vleet teaches wherein each individual aggregate Bloom filter data file [Paragraph 55: using Bloom filter process]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Bloom filter process taught by Vleet in compression and aggregation data taught by Sasaki for the purpose of reducing the processing and data retrieval [Vleet Paragraph 55].

Sasaki does not expressly teach "*file has a predetermined expiry time, the servers have means for forwarding only the data files that have not exceeded their predetermined expiry times*."

However, Akhtar teaches file has a predetermined expiry time, the servers have means for forwarding only the data files that have not exceeded their predetermined expiry times [Column 7 Line 44 – 47: packet with time to live (expiry time) and if it is expired, then they do not forward the packet]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have expiry time taught by Akhtar on aggregated compressed data file taught by Sasaki for the purpose of providing improved routing real-time data traffic in a communication network [Akhtar Column 4 Line 25 – 27].

22. Regarding to **claim 21**, Van Renesse teaches wherein individual servers have means for deleting from the data that is to be forwarded any data that has been previously received and forwarded by the same device [Column 6 Line 30 – 37: deleting overlapping messages].

23. Regarding to **claim 22**, Van Renesse teaches wherein individual servers have means for extracting data required by a processing device associated with the server [Column 3 Line 55 – Column 4 Line 10: updating replicate management information base with update message with information In order to update base with update message, it needs to extract the date contained in the message].

24. **Claims 23 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki, Akhtar, and Vleet as applied to claim 3 above, and further in view of Vardakas (US Patent 5,383,187).

25. Regarding to **claim 23**, Vleet teaches data is aggregated by the Bloom filter process so that in each said time frame only a single Bloom filter data file is transmitted by the relay device [Paragraph 55: using Bloom filter process]. Therefore, it would have been obvious to combine Vleet for the same reason set for claim 3.

Vleet does not expressly teach "*wherein the data that is received at the relay device from different sources at the same time frame*."

However, Vardakas teaches wherein the data that is received at the relay device from different sources at the same time frame [Column 9 Line 57 - Column 10 Line 2]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit each message during a single time frame taught by Vardakas

when transmitting files taught by Akhtar for the purpose of improve routing data packets through packet communication networks [Vardakas Colum 2 Line 61 – 63].

26. Regarding to **claim 24**, Vleet teaches data is aggregated by the Bloom filter process so that in each said time frame only a single Bloom filter data file is transmitted by the relay device [Paragraph 55: using Bloom filter process]. Therefore, it would have been obvious to combine Vleet for the same reason set for claim 3.

Vleet does not expressly teach "*wherein the data that is received by the receiver of the relay device from different sources at the same time frame*."

However, Vardakas teaches wherein the data that is received by the receiver of the relay device from different sources at the same time frame [Column 9 Line 57 - Column 10 Line 2]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit each message during a single time frame taught by Vardakas when transmitting files taught by Akhtar for the purpose of improve routing data packets through packet communication networks [Vardakas Colum 2 Line 61 – 63].

27. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Renesse, Sasaki, Akhtar, and Vleet as applied to claim 17 above, and further in view of Vardakas (US Patent 5,383,187).

28. Regarding to **claim 25**, even though Van Renesse and Vleet teach transmitting aggregated file with Bloom filter process, Van Renesse and Vleet do not expressly teach "*wherein the data that is received at the relay device from different sources at a*

same time frame is aggregated by the Bloom filter process so that in each said time frame only a single Bloom filter message is transmitted by the relay device."

However, Vardakas teaches wherein the data that is received at the relay device from different sources at a same time frame is aggregated by the Bloom filter process so that in each said time frame only a single Bloom filter message is transmitted by the relay device [Column 9 Line 57 - Column 10 Line 2]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit each message during a single time frame taught by Vardakas when transmitting files taught by Akhtar for the purpose of improve routing data packets through packet communication networks [Vardakas Colum 2 Line 61 – 63].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BOBAE K. CHENEY whose telephone number is (571)270-7641. The examiner can normally be reached on Monday - Thursday 9:00 AM- 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ian Moore can be reached on (571)272-3085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BOBAE K CHENEY
Examiner
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